



# Trend & Technology 2

## Society Information Display 2009



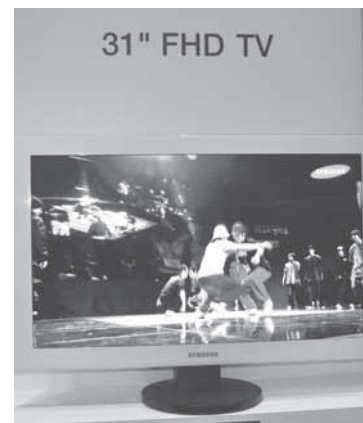
< 1> SID 2009

2009 (SID 2009)가 LCD, AMOLED, 3D SID 2009  
Henry B. Gonzalez Convention Center 5 31 ( ) 6 5 240 Hz 139.7 cm Full HD



< 2> world 1st true 240 Hz 139.7 cm FHD LCD TV

LCD 240 Hz 1 60 Display 3D 3D LCD 3D LCD 58.4 cm 3D LCD 240 가 Full HD 3D LCD 2 LCD 240 Hz 가 LCD 3D LCD 2D LCD 2 4 3D LCD 3D 3D LTPS(Low Temperature Poly Silicon) FMM(Fine Metal Mask) 78.7 cm FHD AMOLED(< 3>(a)) mono LCD 15.2 cm LCD Color (< 8>(a)) Monochrome 15.2 cm e-book(< 8>(b)), 27.9 cm



< 3>



78.7 cm FHD AMOLED( ), 35.8 cm AMOLED TV( )

35.8 cm AMOLED TV(< 3>(b)), Oxide TFT LCD 1-chip 38.1 cm Note PC printable oxide TFT - LCD 10.2 qVGA(< 4>), 25.9 cm Color e-paper(< 5>(a)) OLED(< 5>(b)), 10.2 cm WQVGA Flapping Display(< 6>(a)) 30.5 cm AMOLED(< 6>(b))

LG Display 119.4 cm switchable lens type, 58.4 cm active retarder, 61.0 cm patterned retarder, 58.4 cm shutter glasses 3D (< 7>)

LG



< 4> Oxide TFT-LCD 1-chip 38.1 cm Note PC( ), printable oxide TFT-LCD 10.2 cm qVGA( )



< 7> 119.4 cm switchable lens type, 58.4 cm active retarder, 61.0 cm patterned retarder, 58.4 cm shutter glasses 3D



< 5> 25.9 cm Color e-paper( ), OLED( )



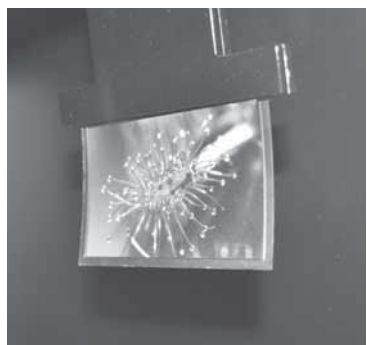
OLED

가 RGB  
가 Shadow mask

Universal display

OLED(< 12>(a)), 10.2 cm  
wrist - worn AMOLED(< 12>(b)),  
OLED(< 12>(c))  
Universal display LG

Display가  
(Phosphorescent material)  
10.2 cm AMOLED(<  
12>(b)) 81,6 × 61 mm  
QVGA(320 × RGB × 240 pixels)  
100 cd/m<sup>2</sup>, 1000 : 1  
가 , 167  
. 76 μm (steel)



< 6> 10.2 cm WQVGA Flapping Display( ), 30.5 cm AMOLED( )



flexible e - paper(< 9>(a)), 38.1 cm HD micro thin  
AMOLED(< 9>(b)), 7.6 cm WqVGA micro thin 5.08 cm  
AMOLED(< 9>(c)), 7.6 cm AMOLED(< E - INK  
9>(d))

Kodak (Amorphous silicon)  
12.2 cm AMOLED(< 10>) OLED(<  
11>) OLED  
AMOLED

(Electronic ink)

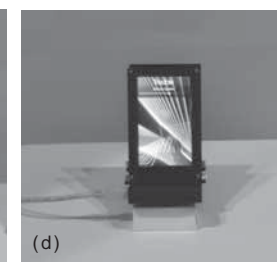
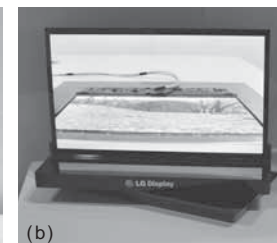
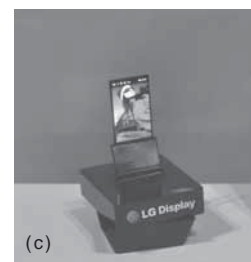
E - INK



< 8> 15.2 cm LCD Color( ) mono



(가) Monochrome 15.2 cm LCD e-book( )



< 9> (a) 27.9 cm flexible e-paper,  
(b) 38.1 cm HD micro thin AMOLED,  
(c) 7.6 cm WqVGA micro thin AMOLED,  
(d) 7.6 cm AMOLED

, IREX IREX  
Digital reader 1000S(< 13>(a)), AMAZON KINDLE  
2(< 13>(b)), SONY reader digital book PRS 700(<  
13>(c)), NEC 35.1 cm (<  
14>(a)), Motorola Hitachi Mobile  
(< 14>(b))  
. E - INK

가 가

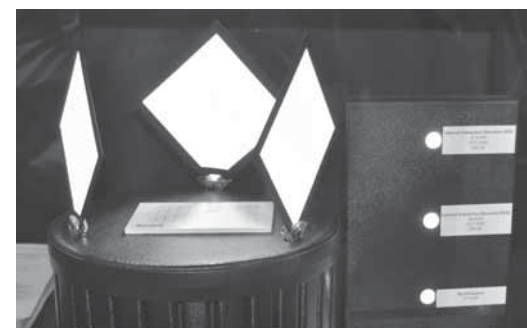
Microvision  
(pico - projector)

Scanned laser

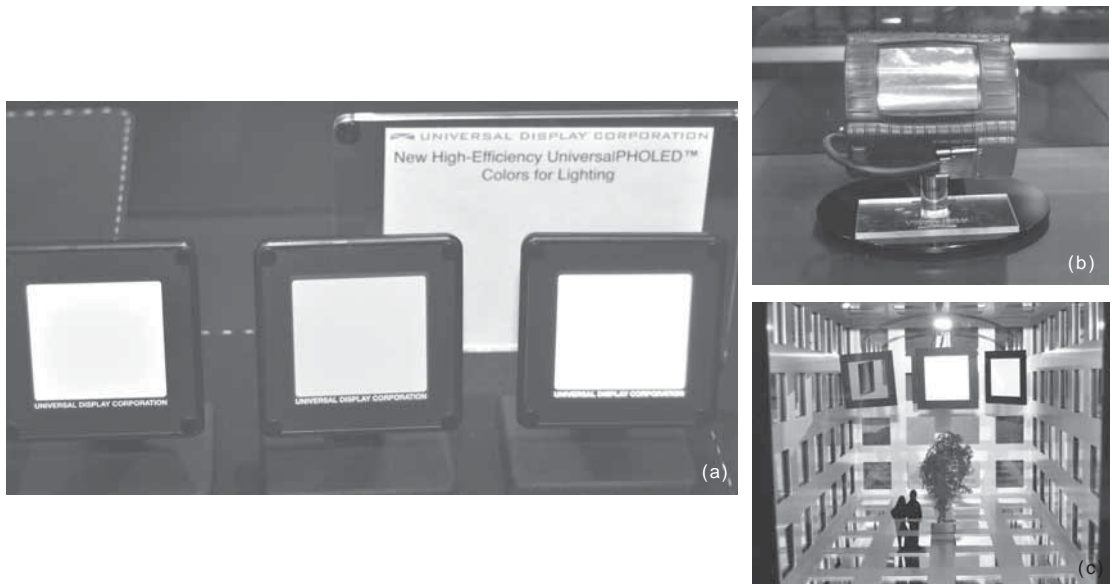
(< 15>).  
847 x



< 10> Amorphous Silicon 12.2 cm AMOLED



< 11> OLED solid state lighting



< 12> (a) OLED, (b) 10.2 cm wrist-worn AMOLED, (c) OLED

Item	Resolution	Size	Weight	Thickness	Touch Panel
(a)	480(WVGA)	30.5 cm	254.0 g	2.5 mm	Capacitive touch panel
(b)	600 × 400	10.9 cm	-	-	Resistive touch panel

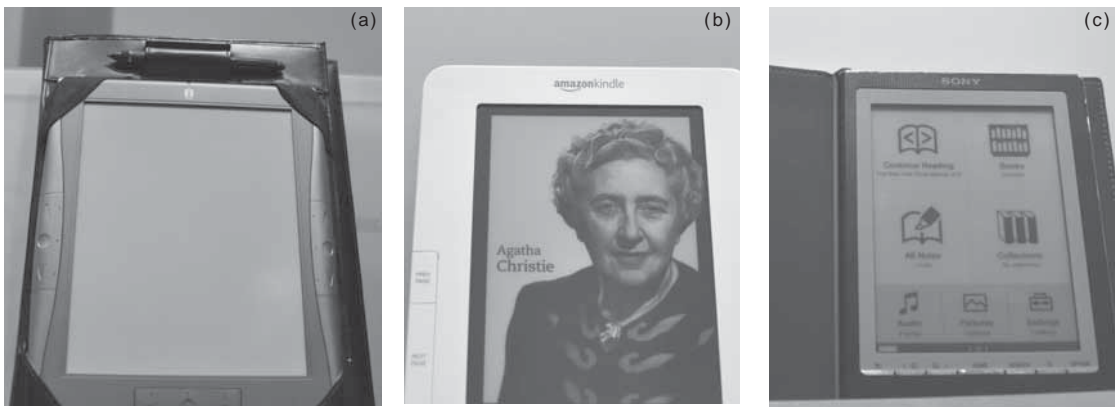
(Bi-stable mode)

(Capacitive touch panel) (Resistive touch panel)

< 15> Arizona State University Flexible Display Center(FDC)

WINTEX 10.9 cm (Electronic paper display, EPD)< 16>(a)), 10.9 cm

< 16>(b)) Universal Display



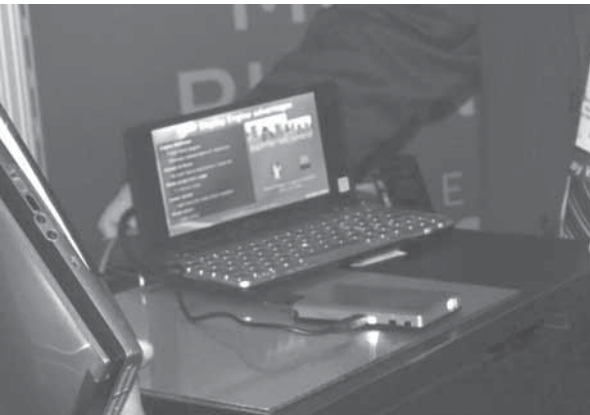
< 13> (a) IREX Digital reader 1000S, (b) AMAZON KINDLE 2, (c) SONY reader digital book PRS 700



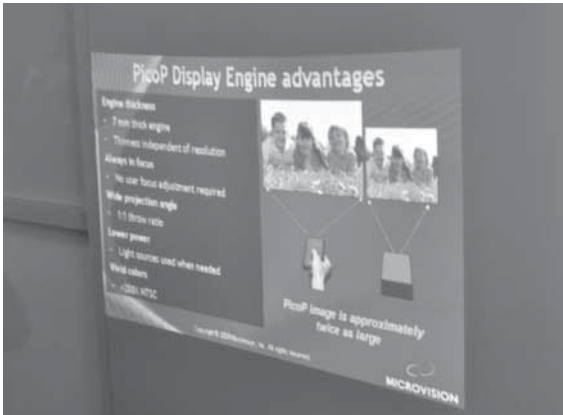
< 14> NEC 35.1 cm



( ), Motorola Hitachi Mobile ( )



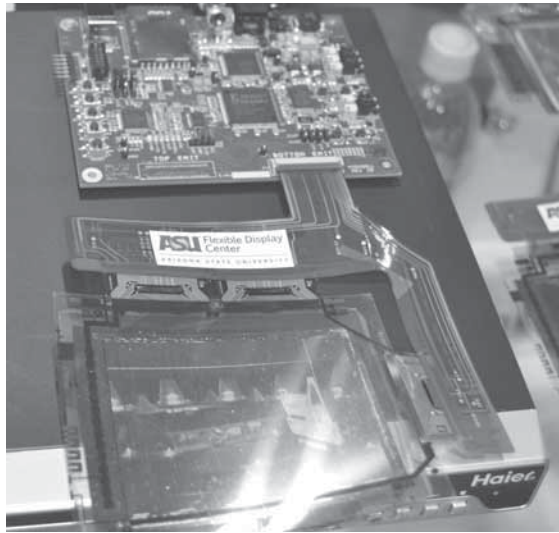
< 15> Microvision



< 16> 10.9 cm



( ), 10.9 cm ( )



< 17> Arisona State University Flexible Display Center

Universal Display  
10.4 cm QVGA Phosphorescent OLED(PHOLED)

SID 2009

가

가

2010

SID

2009 ( )  
(No.2009 - 0083126)  
(R32 - 2008 - 000 - 10082 - 0)

- < >  
1) (<http://diana.korea.ac.kr>)  
2) (<http://www.sid.org>)

## Trend & Technology 3

(一ノ瀬 昇)  
Source : Monthly ' DISPLAY ' June 2009, TechnoTimes of Japan

가  
(CRT) TV LCD  
TV PDP TV가

가  
HD(High Definition)  
(refresh rate), (調光)  
가 (高精細)

(實装)

< 1> ( ) 1)

가 가

가

(粉體) 1 μm ~ nm